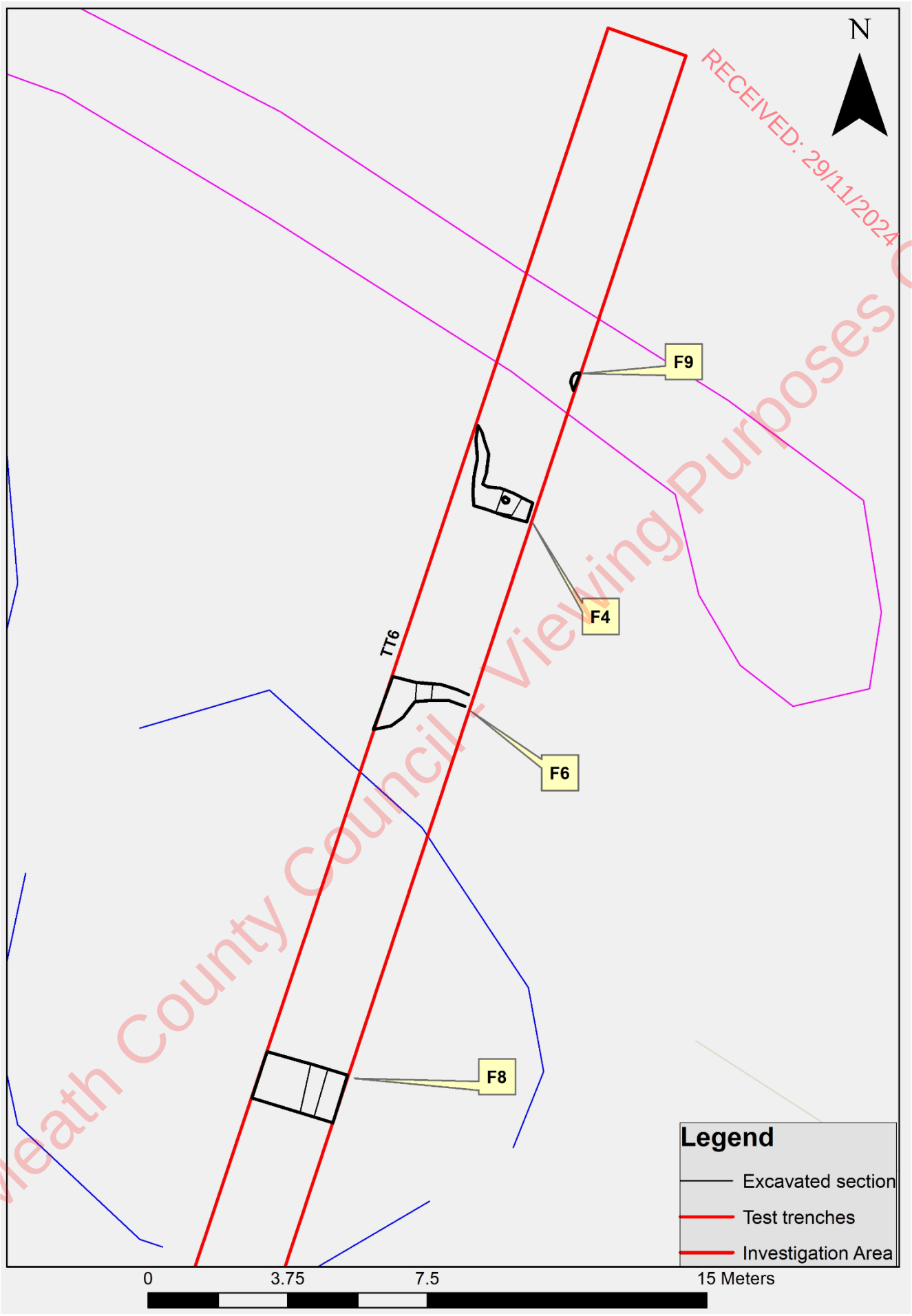

Figure 10: Trench 6 showing F6-F8.

5.3.1.3 Test Trench 10

Trench 10 was excavated across geophysical anomaly 13 towards the east side of the northern portion of the site. After the removal of c. 0.4m of ploughsoil a yellow natural and a linear feature (F10) were exposed. F10 was not manually investigated in this trench (see Trench 11 for further details) and measured 1.9m in width E/W. It appeared to be filled with a grey-brown material.

Plate 11: Trench 10, looking east. Note linear feature F10 in background.

Plate 12: Linear F10 in Trench 10, looking south.

5.3.1.4 Test Trench 11

Trench 11 was excavated to the south of Trench 10 across geophysical anomaly 13. A linear feature (F12) corresponding to the anomaly was also uncovered in this trench after the removal of 0.4m ploughsoil. It appears to represent a continuation of the linear feature F10 uncovered in Trench 10 further to the north. A section was manually excavated across F12 showing it to be filled with a sterile grey compact clay-silt (F11).

The fill (F11) did not contain any charcoal flecks and no artefactual material was recovered. The cut (F12) had a broad U-shaped profile and measured 2.4m in width E/W x 0.35m in depth.

Plate 13: Section manually excavated across linear feature F12 in Trench 11.

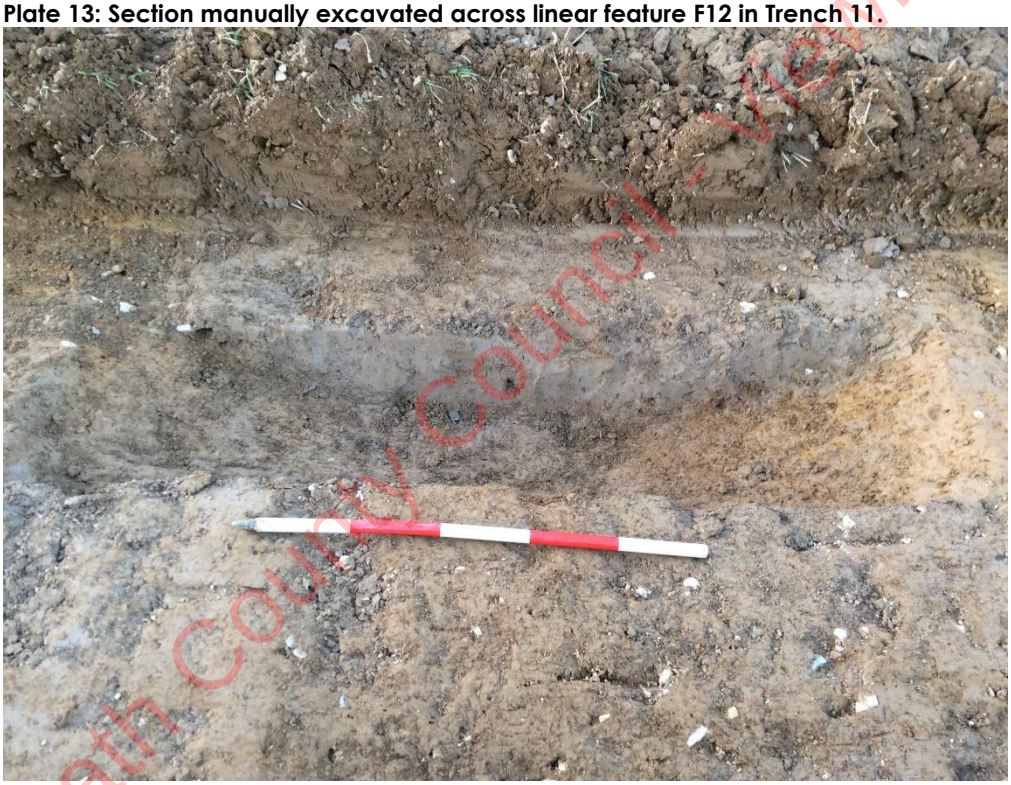

Plate 14: Section face of fill F11 in linear F12.

Plate 15: General view of Trench 11, looking east.

5.3.1.5 Test Trench 17

Trench 17 was excavated across geophysical anomaly 9 to the south of SMR monument ME034-031. One linear feature (F13) was exposed within this trench after the removal of c. 0.4m of ploughsoil. It was not manually investigated and measured 1.6m in width (E/W). It appeared to cut a very stoney natural at the west which became gravelly at the east. It appeared to be filled with a mid-brown stoney material.

Plate 16: General view of Trench 17, looking west.

Plate 17: Linear feature F13 in trench 17, looking east.

5.3.1.6 Test Trench 18

Trench 18 was excavated to the north-west of Trench 17 across geophysical anomaly 8, SMR monument ME034-031. It was orientated NE/SW and extended across the suspected enclosing ditch of the monument as well as a number of potential features within the interior of the fort. A large ditch feature F14 was exposed towards the centre of the trench where the geophysical survey had shown the suspected enclosing elements of this site. The ditch measured 3m in width and appeared to be filled with a brown sandy silt with charcoal flecks and occasional stone inclusions.

Plate 18: Ditch F14 exposed in Trench 18, looking NE.

Approximately 5m to the south-west a narrow linear feature F16 was exposed after the removal of the overburden. It extended across the trench in a NW/SE direction to the east of a wider linear feature F18. Manual investigation of F16 showed it to comprise a shallow linear filled with a grey-brown sandy silt with occasional charcoal flecks (F15). No artefactual material was recovered from the excavated portion of the fill. The cut of the linear was shallow, measuring only 0.1m in depth and had a broad U-shaped profile. It measured 0.5m in width and was exposed for a length of 2.2m NW/SE across the width of the test trench.

A wider linear feature (F18) extended across the width of the trench in a NW/SE direction c. 0.6m to the west of the aforementioned linear F16. An investigative section was manually excavated across F18 and showed it to contain one fill (F17). F17 consisted of a relatively sterile mid-brown slightly stoney sandy silt, with inclusions of occasional charcoal flecks and one tiny fragment of burnt bone. No artefactual material was recovered from the excavated fill. The cut of F18 had a broad U-shaped profile and measured 1.2m in width x 0.33m in depth.

At the east side of linear F16 a small pit (F20) was exposed near the south baulk of the trench and was half-sectioned. The fill of the pit (F19) consisted of a compact dark brown sandy silt with frequent inclusions of charcoal flecks. Three pieces of flint debitage were recovered from the fill, however, no other artefactual material was noted. The cut of F20 was sub-circular/oval in plan with a sharp break of slope at the top on the east, north and south sides. It measured 0.45m in length N/S x 0.4m in width E/W and 0.19m in depth.

Plate 19: Shallow linear feature F16 in Trench 18, looking north.

Plate 20: Section excavated across linear F18 in Trench 18.

Plate 21: Linear F18, looking NW.

Plate 22: Linears F16 (left of photo) and F18, looking SE.

Plate 23: Pit F20 in Trench 18, looking north.

Plate 24: General view of Trench 18 looking NE. Ditch F14 visible in background.

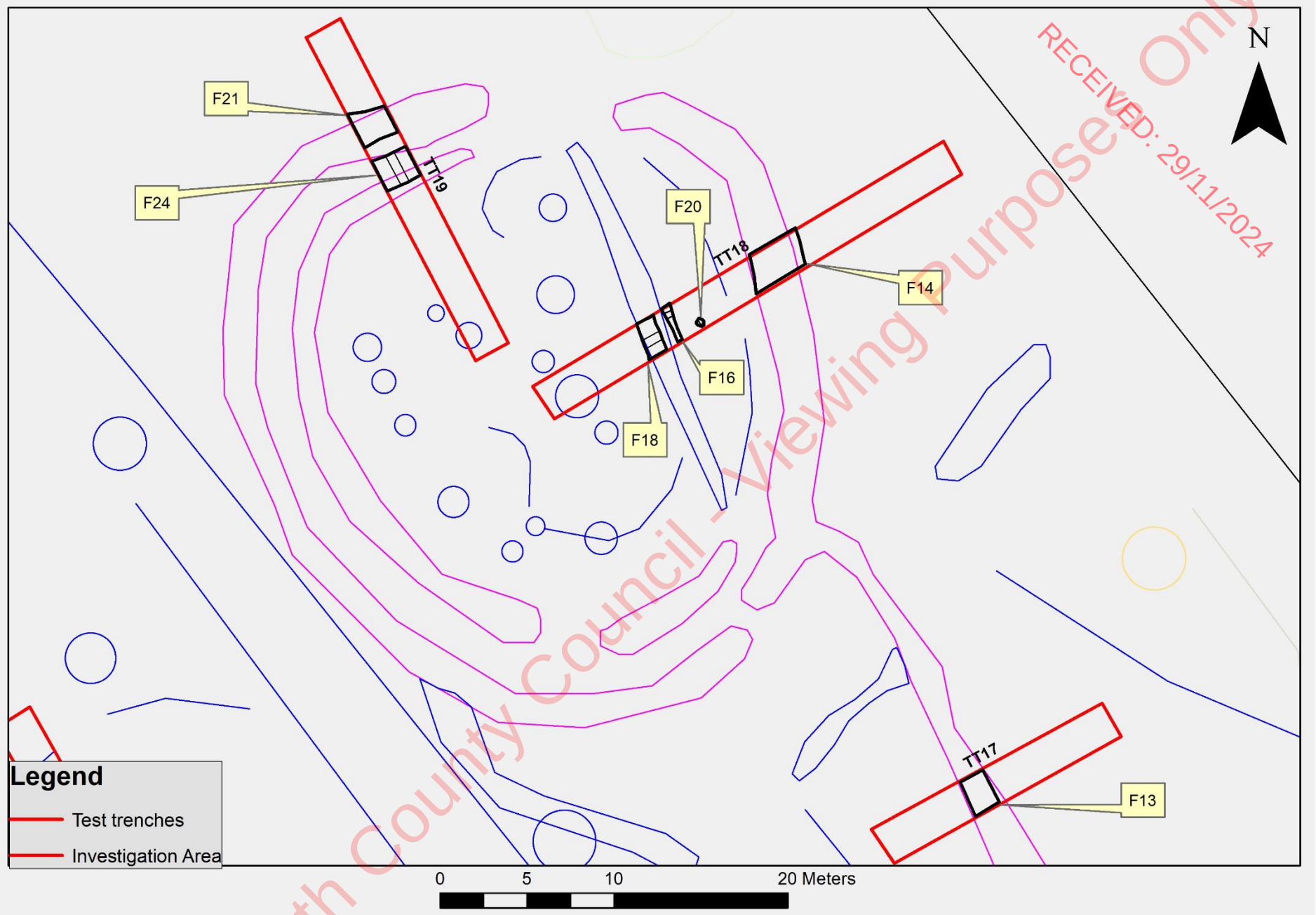

Figure 11: Trenches 17-19 showing F13-F24.

5.3.1.7 Test Trench 19

Trench 19 was also excavated across geophysical anomaly 8, SMR monument ME034-031. It was orientated NW/SE, perpendicular to Trench 18 and was positioned across the suspected enclosing elements of the monument. After the removal of 0.37-0.4m of ploughsoil two parallel ditch features (F21) and (F24) were exposed. The northernmost ditch (F21)was not manually investigated but appeared to be filled with a mid-brown sandy silt with inclusions of occasional charcoal flecks. It measured 2.1m in width.

Approximately 1m to the south the second ditch (F24) was exposed. An investigative section was manually excavated across this ditch and showed it to be filled with two main layers (F22 and F23). The upper fill (F22) comprised a compact mid-brown silty sand with inclusions of small stones and occasional charcoal flecks. It measured 0.32m in thickness and 2m in width (N/S). The underlying fill (F23) consisted of a grey-brown moderately compact silty sand with inclusions of a moderate amount of charcoal flecks, particularly towards the south side of the cut. It measured 0.36m in thickness and 1.6m in width (N/S). No artefactual material was recovered from F22 while one piece of flint debitage came from the basal fill F23. The cut of the ditch (F24) has a broad U-shaped profile, displaying a sharp break of slope at the top on both the north and south sides. Both sides were steep, sloping gradually to a rounded, even sandy base. The ditch cut measured 2m in width (N/S) x 0.74m in depth (max).

Plate 25: General view of trench 19 after manual clean back. Ditch F21 in foreground with ditch F24 a short distance to the south, looking SW.

Plate 26: Ditch F21 at north-west end of Trench 19, looking north-west.

Plate 27: Ditch F24 in foreground, pre-ex.

Plate 28: Section excavated across ditch F24, looking west.

Plate 29: Detail of section across Ditch F24.

Plate 30: General view of section across ditch F24, looking SE.

6 POTENTIAL IMPACTS

Targeted testing of nineteen geophysical anomalies at Naul townland, Co. Meath was undertaken to determine if the anomalies were archaeological in nature. The results of the testing have demonstrated that the majority of the anomalies do not represent archaeological features with a small number of exceptions as follows:

6.1 GEOPHYSICAL ANOMALY 8 – SMR MONUMENT ME034-031

The excavation of trenches 18 and 19 across this site revealed the presence of enclosing ditches (F14, F21 and F24) as well as less substantial linear features (F16 and F18) and a pit (F20). The ditches uncovered largely correlate with the results of the geophysics. Trench 17 excavated across a linear anomaly to the south of the recorded monument also uncovered a linear feature (F13) which may also be archaeological in nature. While no readily dateable artefactual material was recovered from the investigated features, they undoubtedly represent archaeological activity. The site has been classified as a ringfort on the Historic Environment Viewer.

Pre-mitigation Impact

Should the proposed development proceed without the implementation of any mitigation measures, quarrying activity in this area would result in the total destruction of the monument resulting in a direct, permanent negative impact to the resource.

Mitigation

- Preservation in situ of the SMR monument thereby avoiding any potential direct impacts to same.
- Establishment of a 20m buffer zone around the monument to ensure no accidental damage occurs during the course of the adjacent quarry development should it proceed.
- Should preservation in situ not be possible, preservation by record (excavation) should be undertaken subject to the agreement of the National Monuments Service, Dept. of Culture, Heritage and the Gaeltacht (DCHG).
- The methodology for preservation in situ and/or preservation by record should be agreed between the project archaeologist, the appointed archaeological consultant and the National Monuments Service.
- A report on the excavation will be compiled detailing the results and be illustrated with drawings, photographs and any specialist reports required, in compliance with the terms of the excavation licence.
- Archaeological monitoring of topsoil removal associated with the quarry development should it proceed. A report on the monitoring will be compiled on completion of the work and submitted to the relevant authorities.

6.2 GEOPHYSICAL ANOMALY 19

Test trenches 6 and 7 were excavated across geophysical anomaly 19 at the west side of the proposed development area. No potential archaeological features were uncovered in Trench 7. In trench 6 three linear features (F4, F6 and F8) and a possible pit (F9) were uncovered. While they did not accord directly with the geophysical anomalies detected they clearly represent archaeological activity in this area. Medieval pottery was recovered from the fill of linear F4 and may suggest a similar date for the other features identified. It is not clear what type of site is represented and a number of tentative interpretations are possible, namely medieval agricultural activity or medieval settlement. Further investigation would be required to determine the precise nature, form and full extent of the archaeology in this part of the site.

Pre-mitigation Impact

Should the proposed development proceed without the implementation of any mitigation measures, quarrying activity in this area would result in the total destruction of the archaeological features resulting in a direct, permanent negative impact to the resource.

Mitigation

- Preservation in situ of the identified features thus avoiding any potential direct impacts to same.
- Should preservation in situ not be possible, preservation by record (excavation) should be undertaken subject to the agreement of the National Monuments Service, Dept. of Culture, Heritage and the Gaeltacht (DCHG).
- The methodology for preservation in situ and/or preservation by record should be agreed between the project archaeologist, the appointed archaeological consultant and the National Monuments Service.
- A report on the excavation will be compiled detailing the results and be illustrated with drawings, photographs and any specialist reports required, in compliance with the terms of the excavation licence.
- Archaeological monitoring of topsoil removal associated with the quarry development should it proceed. A report on the monitoring will be compiled on completion of the work and submitted to the relevant authorities.

6.3 GEOPHYSICAL ANOMALY 13

Trenches 10 and 11 were excavated across geophysical anomaly 13. A linear feature (F10 and F12) was uncovered in both trenches and corresponds to the anomaly. An investigative section excavated across the feature showed it to be a relatively shallow cut filled with a sterile grey material. The form and fill of the linear may suggest that it represents a relict field boundary, however, the lack of artefactual material recovered means it is of unknown date. A boundary is not indicated in this location on the 1st or 2nd edition OS maps.

Pre-mitigation Impact

Should the proposed development proceed without the implementation of any mitigation measures, quarrying activity in this area would result in the total destruction of the linear feature identified in Trenches 10 and 11 resulting in a direct, permanent negative impact to the resource.

Mitigation

- Preservation by record (excavation) of the linear feature identified should be undertaken subject to the agreement of the National Monuments Service, Dept. of Culture, Heritage and the Gaeltacht (DCHG).
- The methodology for preservation by record should be agreed between the project archaeologist, the appointed archaeological consultant and the National Monuments Service.
- A report on the excavation will be compiled detailing the results and be illustrated with drawings, photographs and any specialist reports required, in compliance with the terms of the excavation licence.
- Archaeological monitoring of topsoil removal associated with the quarry development should it proceed. A report on the monitoring will be compiled on completion of the work and submitted to the relevant authorities.

6.4 GEOPHYSICAL ANOMALY 15

Trench 5 was excavated over geophysical anomaly 15. One pit (F2) was uncovered and investigated. No dateable material was recovered from the fill of the pit, therefore this feature is of unknown date. It is located c. 50m to the north-east of the linear features identified in Trench 6.

Pre-mitigation Impact

Should the proposed development proceed without the implementation of any mitigation measures, quarrying activity in this area would result in the total destruction of the pit identified in Trench 5 resulting in a direct, permanent negative impact to the resource.

Mitigation

- Preservation by record (excavation) of the pit identified should be undertaken subject to the agreement of the National Monuments Service, Dept. of Culture, Heritage and the Gaeltacht (DCHG).
- The methodology for preservation by record should be agreed between the project archaeologist, the appointed archaeological consultant and the National Monuments Service.
- A report on the excavation will be compiled detailing the results and be illustrated with drawings, photographs and any specialist reports required, in compliance with the terms of the excavation licence.
- Archaeological monitoring of topsoil removal associated with the quarry development should it proceed. A report on the monitoring will be compiled on completion of the work and submitted to the relevant authorities.

7 CONCLUSION AND RECOMMENDATIONS

Archaeological testing of a proposed quarry development at Naul townland was undertaken under licence from the NMS of the DCHG (Licence No. 20E0053). The testing was requested by Meath County Council as Further Information as part of an archaeological impact assessment. Thirty trenches were excavated within the site and were positioned to target nineteen geophysical anomalies detected during an earlier geophysical survey (Earthsound, 2019). The majority of anomalies tested did not produce any archaeological results. Recent agricultural activity was noted in the majority of the trenches in the form of plough scars, plough furrows and land drains. Archaeological features were identified in Trenches 5, 6, 18 and 19 with linear features of unknown date uncovered in Trenches 10, 11 and 17. Direct negative impacts to these features as a result of the proposed development have been identified and appropriate mitigation measured proposed. All mitigation is subject to the approval of the National Monuments Service and the Planning Authority.

8 BIBLIOGRAPHY

- Record of Monuments and Places (RMP) for County Meath and Dublin.
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- Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Framework and Principles for the Protection of the Archaeological Heritage, 1999.
- Guidelines on the information to be contained in Environmental Impact Statements, EPA 2017.
- 1st Edition 6 inch OS maps
- 2nd Edition OS maps
- *www.archaeology.ie/historicenvironment*

9 PHOTOGRAPHIC RECORD OF TRENCHES EXCAVATED

Plate 31: Trench 1, looking E.

Plate 32: Trench 2, looking W.

Plate 33: Trench 3 looking N. Note darker patches of decayed stone.

Plate 34: Trench 4, looking W.

Plate 35: Trench 5, looking NW.

Plate 36: Trench 6, looking NE.

Plate 37: Trench 7, looking SE.

Plate 38: Trench 8, looking SE.

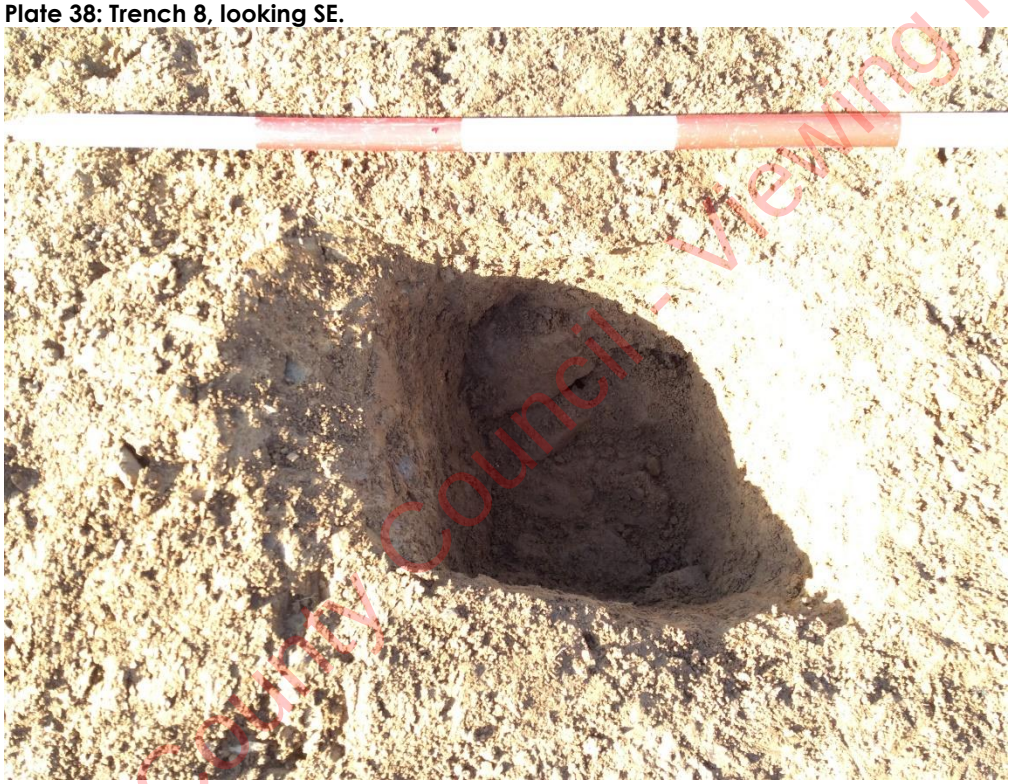

Plate 39: Land drain in Trench 8.

Plate 40: Trench 9, looking NW.

Plate 41: Trench 10, looking E.

Plate 42: Trench 12, looking ENE.

Plate 43: Trench 13, looking NW.

Plate 44: Trench 14, looking NE.

Plate 45: Trench 15, looking NW.

Plate 46: Trench 16, looking NW.

Plate 47: Land drain in Trench 16, looking ENE.

Plate 48: Trench 17, looking SW.

Plate 49: Trench 18, looking NE.

Plate 50: Trench 19, looking SE.

Plate 51: Trench 20, looking S.

Plate 52: Trench 21, looking W.

Plate 53: Trench 22, looking NW.

Plate 54: Trench 23, looking SE

Plate 55: Trench 24, looking NW.

Plate 56: Trench 25, looking SW.

Plate 57: Trench 26, looking WSW.

Plate 58: Trench 27, looking NW.

Plate 59: Trench 28, looking S.

Plate 60: Trench 29, looking E.

Plate 61: Trench 30, looking S.

Plate 62: Land drain in Trench 30.

10 CONTEXT LIST

Feature No.	Type	Trench	Dimensions
1	Fill of pit	5	0.94m x 0.7m x 0.45m
2	Cut of pit	5	0.94m x 0.7m x 0.45m
3	Fill of linear	6	0.7m in width x 0.15m in depth
4	Cut of linear	6	0.7m in width x 0.15m in depth
5	Fill of linear	6	0.55m in width x 0.3m in depth
6	Cut of linear	6	0.55m in width x 0.3m in depth
7	Fill of linear	6	1.35m in width x 0.17m in depth
8	Cut of linear	6	1.35m in width x 0.17m in depth
9	Possible pit	6	0.5m in length NE/SW x 0.16m in width
10	Linear	10	1.9m in width (unexcavated)
11	Fill of linear	11	2.4m in width x 0.35m in depth
12	Cut of linear	11	2.4m in width x 0.35m in depth
13	Linear	17	1.6m in width (unexcavtaed)
14	Ditch	18	3m in width (unexcavated)
15	Fill of linear	18	0.5m in width x 0.1m in depth
16	Cut of linear	18	0.5m in width x 0.1m in depth
17	Fill of linear	18	1.2m in width x 0.33m in depth
18	Cut of linear	18	1.2m in width x 0.33m in depth
19	Fill of pit	18	0.45m x 0.4m x 0.19m
20	Cut of pit	18	0.45m x 0.4m x 0.19m
21	Ditch	19	2m in width (unexcavated)
22	Fill of ditch	19	2m in width x 0.32m in depth
23	Fill of ditch	19	1.6m in width x 0.36m in depth
24	Cut of ditch	19	2m in width x 0.74m in depth